Breast Health, Screening and Breast Cancer Prevention

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What we’ll be talking about today...

- Breast cancer facts
- What is cancer? What causes it?
- Breast anatomy – what’s inside of a breast?
- What is breast cancer?
- What is breast cancer risk?
- How to reduce breast cancer risk
- What is breast cancer screening?
- Breast cancer screening guidelines based on risk
- Additional information
Important things to know about breast cancer

- Breast cancer is the **most common cancer** in women in New York State (after skin cancer) and the **second most common** cause of cancer death.

- **Age differences:** Over 75% of women who are diagnosed with breast cancer are age **50 or older**. Younger women (6%) get more **aggressive types** of breast cancer.

- **Ethnic differences:** Although Caucasian women have a slightly **higher rate** of breast cancer than African American, African American women **get it at younger ages than Caucasian women**. Hispanic women have a lower rate but tend to get diagnosed with **more advanced** cancers.

- More women are surviving breast cancer in recent years due to 1) **early detection**, 2) finding breast cancer before it spreads and 3) because of **improvements in treatment**.
What is cancer?

Cancer cells are damaged cells that can multiply without stopping, creating tumors that can spread into other parts of the body.
What causes cancer?

➢ It is thought that a combination of harmful exposures in the environment, gene mutations and lifestyle that can lead to cancer

➢ There are hundreds of types of cancers and the causes of many of those cancers are still unknown
What is inside of a breast?

The female breast is made up mainly of:

**Lobules**—the milk-producing glands

**Ducts**—tiny tubes that carry the milk from the lobules to the nipple

**Stroma**—fatty tissue and connective tissue surrounding the ducts and lobules, blood vessels, and lymphatic vessels
What is breast cancer?

Breast cancer most often begins with cell changes in the breast milk ducts and may grow and spread from there.

- **Normal milk duct**
- **Non invasive cancer:** Cancer cells stay inside the duct
- **Invasive cancer:** Cancer cells spread out of the duct to other parts of the breast
Recognizing the signs and symptoms of breast cancer

- The most common symptom is a **lump** or mass in the breast
- One breast **suddenly larger or misshapen** as compared to the other (new breast asymmetry)
  - Bloody nipple discharge
  - Nipple inversion
  - Crusting around nipple
  - Redness, heat or swelling of the breast
  - Orange peel skin
Something that can make you more likely to develop a condition, like breast cancer is called a risk factor.
What risk factors can make someone more likely to develop breast cancer?

- Older age
- Obesity & obesity after menopause
- Inherited gene mutation
- Lack of exercise
- Unhealthy diet
- Breast cancer in self/family
- Birth after 30
- Drinking Alcohol
- Breast density
- Older age
Who is at high risk for breast cancer?

Women known to be at high risk for breast cancer have;
1) genetic mutations
2) previous breast cancer
3) family history of breast cancer
There is no sure way to prevent breast cancer but there are lifestyle changes all women can make to reduce their breast cancer risk.

- Learn your family history of breast cancer and share with doctors.
- Get regular screening—mammograms.

7 Ways to reduce breast cancer risk:
1. Limit your alcohol intake.
2. Do not smoke.
3. Be physically active.
4. Control your weight.
5. Limit hormone therapy.
7. Eat a healthy diet.

There are 2 more ways!
What is breast cancer screening?

- Breast cancer screening with a mammogram looks for changes in the breast over time.
- If the screening test identifies a problem, more testing may be needed.
- A mammogram may find cancer before someone can feel a lump or have any signs or symptoms of the disease.
American Cancer Society recommendations for breast cancer screening for average risk

Age 40-44 years  Discuss with doctor on when to begin screening

Age 45 to 54 years  Have a mammogram every year

55 years and older  Have a mammogram every other year
Mammogram

- A 2D digital mammogram is a low dose x-ray of the breast
- The breast is pressed between 2 plates to flatten and spread the tissue for better visualization of the structures
- This produces an image most often seen on a computer screen
How to prepare for a mammogram

- Do not use deodorants or body powders on the day of the mammogram

- Wear two piece clothing

- Make a mammogram appointment the week after your menstrual period
Regular screening with mammogram is important because...

- It can find **breast cancer early, before it has had time to spread**
  - which means:
    - the cancer is **easier to treat**
    - it reduces the risk of dying from breast cancer
What is mammographic breast density?

- Mammographic breast density is a measure used to describe the **amount** of glandular and connective tissue in the breast as compared with fat.

- **High breast density** finds a greater amount of glandular and connective tissue compared to fat.

- **Low breast density** finds a greater amount of fat compared to breast and connective tissue.

- Breast density does **NOT** describe how a breast feels to touch.

- Higher breast density is linked to an increased breast cancer risk.
What does mammographic breast density look like?

1. The breasts are almost entirely fatty.
2. There are scattered areas of fibroglandular density.
3. The breasts are heterogeneously dense.
4. The breasts are extremely dense.
Recommendations for women at high risk for breast cancer

Women at high risk for breast cancer include those with a family or personal history, genetic mutation for the breast cancer genes BRCA 1 and BRCA2.

They should speak with their doctor about:

- Screening with mammography before age 40
- Getting additional breast imaging with breast ultrasound or MRI
- Genetic counseling and testing
- Referral to high risk clinic to talk further with doctors
Breast ultrasound

- A breast ultrasound is used to see whether a breast lump is filled with fluid (a cyst) or if it is a solid mass.

- An ultrasound is used in women with mammographic breast density.
Breast MRI (Magnetic Resonance Imaging)

- An MRI uses magnets and radio waves to image organs of the body. A breast MRI is most commonly used once breast cancer is diagnosed to determine spread of disease. The benefits and risks of screening high risk women with breast MRI is still being studied.
Genetic counseling and family history

- Women who have close **family members diagnosed with breast cancer**, and who have themselves been diagnosed with breast cancer can benefit from consultation with a genetic counselor.

- The counselor will chart who in the family has been diagnosed with breast cancer and determine the level of risk for the women developing breast cancer. Women at high risk will be recommended for genetic testing.
Genetic testing, done by providing a small blood sample.

The genes in the blood sample are tested for known genetic mutations such as BRCA 1 and BRCA2.

Women with either of these BRCA mutations receive more counselling and consultation to decide if risk lowering breast surgery is appropriate.

These women can also be enrolled into high risk clinics and be monitored more frequently.
Free cancer screening for uninsured New Yorkers

Manhattan Cancer Services Program
New York Presbyterian, Columbia University Medical Center

212.851.4516
To call for genetic counseling/testing

Columbia Doctors
Genetic Counseling

212-305-6731
THANK YOU
What are your questions?